Beaver Creek: Electrofishing was conducted in Beaver Creek in 2007 to determine its viability as a cold water fishery.

Annual Report 2007

Kettle Creek Conservation Authority

A Sustainable Future

There is no question that the local environment is facing some significant challenges. Shorter winters and warmer, drier summers may be appealing but climate change is and will continue to have a very real impact on our environmental future. Severe erosion, loss of wildlife habitat and decreased water quantity are just some of the things that the Kettle Creek watershed community may experience. Kettle Creek Conservation Authority (KCCA), as an environmental leader must, together with the community, look to solutions and act quickly to ensure a sustainable future in an ever changing climate.

As part of KCCA's environmental monitoring program in 2007, staff began to consider what issues are affecting the watershed's environment and determining what needs to be done to counter or minimize that change. Staff performed electrofishing at various sites throughout the watershed to update KCCA's fish database and to identify species at risk and invasive species. Out of 29 species identified, four were invasive (Common Carp, Goldfish, White Perch and Round Goby). The list of species is being compared to the last inventory done in 1997.

Surface water samples were collected from as many weather events as possible (high flow, low flow, rain events and dry spells) to test for phosphorus levels and nitrate levels. Data collected from 2004 - 2007 suggests that there is a yearly trend in increasing phosphorus levels while nitrate levels are decreasing. Increased phosphorus levels can result in accelerated algae growth and oxygen depletion making waters inhospitable for many fish species.

Due to the low amount of precipitation, Kettle Creek's Low Water Response Team issued a Level One Low Water warning in July 2007 and a Level Two warning in September, which remained in effect for the rest of the year. The drought of 2007 had a significant effect on KCCA's reforestation sites. Forestry staff performed survivability assessments on all tree planting sites since 2002. The results confirmed that decreased precipitation is a contributing factor to the increased mortality rates on planting sites as far back as 2002.

Conversely, staff relished in the identification of over 100 species of birds in the watershed including the Least Bittern, a provincially and nationally ranked threatened species, and the Bald Eagle, a provincially endangered species.

All of this information is being analyzed to establish goals or benchmarks of success. For instance, based on the current climate, land use, and environmental features, what is an acceptable level of phosphorus in the watershed? Then, in 2008, KCCA will report the findings in the form of a Watershed Report Card. The Report Card will be updated on a yearly basis so KCCA and the community can track how the objectives are being met over time. The Report Card will show if we are succeeding or losing ground.

In order to make responsible choices and use our financial and environmental resources wisely we need to determine what is acceptable. By monitoring, evaluating, setting goals and reporting on those goals, KCCA can develop a management plan for the watershed that not only makes sense, it will also ensure a sustainable future.

Kettle Creek
Conservation Authority

Conservation Areas

A five-year infrastructure plan was developed for each of KCCA's conservation areas in 2007. The plan was developed with the aim to keep budgets balanced while still maintaining and improving current infrastructure and allowing for a revenue generating improvement each year.

In 2007, staff began to implement an expansion to the Dalewood Conservation Area. Fifteen new tenting sites and an expanded group camping area were added to the southeast portion of the campground. This will allow for the separation of two different user groups - transient and seasonal campers. The expansion will be complete in 2008 with the upgrading of 17 unserviced sites in the northern portion of the campground to 30-amp service.

Education & Awareness

KCCA staff helped to organize the first ever London-Middlesex Children's Water Festival in May, 2007. Approximately 3,500 students from grades three, four and five took part in the festival that uses fun, interactive displays to teach students the importance of water to their lives and communities. Together, with the City of St. Thomas and other partners, KCCA will bring the St. Thomas-Elgin Children's Water Festival to Pinafore Park in 2008.

Beach Cleanup: KCCA and Municipality of Central Elgin staff joined resources to remove a pile of tires and miscellaneous garbage from the beach in Port Stanley in April, 2007.

The "Lower Kettle Creek Watershed Strategy" was developed in 2007. This is the third and last in a series of reports that strives to build a partnership of community stakeholders to identify local environmental concerns and develop action plans to address these issues. One result of this process, was that KCCA became a partner in the Yellow Fish Road Program.

A $29,750 proposal from KCCA was accepted by the Ministry of the Environment (MOE) to implement an Outreach and Education program for the wellhead protection area in Belmont. The program will educate residents about source water protection, available stewardship programs and living in a wellhead protection area. A similar project is planned for the Port Stanley intake protection zone in 2008.

Environmental Monitoring

In 2007, a specialized piece of analytical equipment was purchased to complete more in-depth turbidity testing. Turbidity is a measure of the cloudiness of water resulting from suspended particles such as clay, silt, organic matter and microorganisms. High turbidity may reduce the ability of aquatic plants to photosynthesize, clog gills in fish, interfere with drinking water disinfection and is often undesirable for recreation and aesthetics. Testing results will be included in the 2008 Watershed Report Card.

As a partner in the MOE's Provincial Water Quality Monitoring Network, KCCA collected additional water samples to test for pesticides. The information collected will be used to better understand the concentrations of specific in-use pesticides in Ontario's rivers and streams.

Lake Erie's Nearshore: The nearshore is of specific concern as it is a source of drinking water and an area of commercial and recreational use.

In late 2007, KCCA partnered with the MOE in the Lake Erie Tributary Monitoring Program. The program is designed to understand and monitor the effects of high flow events from Kettle Creek, Catfish Creek, Silver Creek and Big Otter Creek on the water quality in the nearshore of Lake Erie.

Flood Forecasting

KCCA continues to improve the flood forecasting program to make more precise decisions on when to release safety bulletins and flood warnings. There are three stream gauges in the watershed that are used to monitor water levels every 15 minutes; Upper Kettle Creek at Ferguson Line; Dodd Creek at Lyle Road and Lower Kettle Creek at Fingal Line. This data is used to create real-time hydrographs of stream conditions and together with snow surveys during the winter months and precipitation data, is also used to estimate the spring run-off potential.

In 2007, staff began to compile a photographic diary of how certain flood prone areas appear during high and low flow events. This resource will be valuable in 2008 as staff begin to develop a new Windows-based flood modeling program (HEC-RAS) that is more user friendly than the current DOS-based KCIFFS. Staff will also be installing an additional stream gauge at the mouth of Kettle Creek. All of these innovations will allow KCCA to better predict how a certain weather event may create flooding conditions in the watershed.

Data Collection: A rain gauge was installed at Dalewood Conservation Area in May, 2007 providing data for high and low flows.

Forestry & Stewardship

KCCA planted another 100,000 trees in the watershed as part of a two-year funding partnership with Ontario Power Generation. Survivability assessments in the fall revealed that increased temperatures and low precipitation had a devastating impact on the seedlings. In 2008, KCCA staff will re-evaluate the program to ensure planting techniques yield the best survival. A significant re-planting program will also be undertaken in an attempt to bring survivability up to at least 80%. The Kettle Creek watershed is currently at 13% forest cover, which means KCCA needs to plant 100,000 trees every year for the next 100 years to achieve the 25% forest cover suggested for a healthy watershed.

Tree Planting: 750 local elementary and high school students helped to plant 23 acres of land at the Bucke Conservation Area in May, 2007.

KCCA also partnered with the Elgin Stewardship Council to create a two-acre direct seeding plot at Bucke Conservation Area. The Stewardship Council will monitor the site to determine survival rates of seedlings versus direct seeding.

KCCA stewardship staff created two wetlands on private property in 2007 as part of an ongoing effort to increase surface water retention in the watershed. And finally, KCCA partnered with Presstran employees to remove one tonne of garbage from the ravine system in St. Thomas as part of the annual Kettle Creek Cleanup.

Planning & Regulations

KCCA received funding from the Lake Erie Source Protection Region to purchase ESRI ArcView software and Manifold software. These two GIS programs will allow staff to fully utilize newly acquired colour digital aerial photography, also purchased with source water protection funding.

In 2007, regulation and development reviews continued to provide substantial input into land use, planning and development. Forty-four permits were issued under "Ontario Regulation 181/06 (O.Reg.97/04)", nine Environmental Impact Studies were reviewed and 132 Planning Act Applications were processed, ten of which were major subdivision developments.

Administration

As part of a more comprehensive audit process, KCCA prepared a "Policy and Procedures for Risk Management" document. This policy required KCCA to document all procedures relating to financial management as well as information technology management. The document will be updated on an annual basis.

Together with the Elgin Federation of Agriculture and the Elgin Junior Farmers Alumni, KCCA transferred $12,690 to the Kettle Creek Conservation Trust for the purpose of establishing the Elgin County/Kettle Creek Agriculture Conservation Scholarship. The scholarship committee anticipates making the first award in July, 2008; however, fundraising to grow the fund continues.

Environmental Scholarship: KCCA and CAW Local 1520 partnered in 2007 to help a student pursuing education in the environmental field. Ron Challis, Chair of the Ford CAW Local 1520 Environmental Committee, presents a cheque for $500 to Colleen Hogan.

Our Donor List...

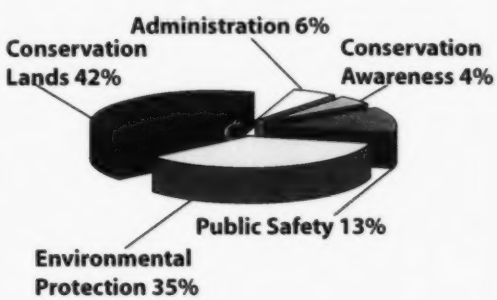
Thank you to the following for their financial donations to Kettle Creek Conservation Authority in 2007:

Allan Hughson • Carol Griffin • CAW Local 1520 • Cheryl Frew • Elgin Area Primary Water Supply System • Elgin Stewardship Council • Elgin Presbyterial UCW • Elgin-St. Thomas Community Foundation • Environment Canada's EcoAction Community Funding Program • Eugene and Linda Smith • Fred and Dorinda Ford • GreenLane Community Trust Fund • Harvey and Janet Patterson • Hennessey, Gibson & Hogan • Kettle Valley Pioneers • Koolen Electric • Linda Duplessis • Littlewood Landscaping Ltd. • Ministry of Natural Resources' Community Fisheries & Wildlife Improvement Program • Northern Casket (1976) Limited • Ontario Power Generation • Patton Cormier Lawyers • Presstran Industries • Richard and Helen Haddow • Riggs Engineering • Rob and Petra Richardson • Robin Foster • Ron and Tracey VanRoestel • Royal Canadian Legion #463 • Sheila Fletcher • Shell Environmental Fund • Shirley Griffin • St. Thomas Field Naturalists • Suncor Energy Products • The Salvation Army - Correctional and Justice Services • Toronto Community Foundation • TD Friends of the Environment Foundation

2007 Financial Statements

Total Revenues: $1,705,839

Total Expenditures: $1,705,776



Source: Audited Financial Statements 2007

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